

PLANS,
SPECIFICATIONS, ESTIMATES,
AND
Remarks on Cottages,



WITH PLATES:

DRAWN UP AT THE REQUEST OF THE

**OSWESTRY SOCIETY, FOR BETTERING
THE CONDITION**

AND

Increasing the Comforts of the Poor.

By T. N. PARKER, Esq.

AND PUBLISHED BY THEIR DIRECTION.

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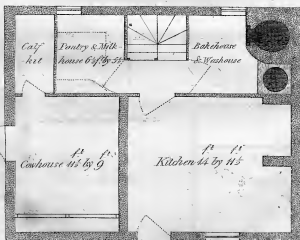
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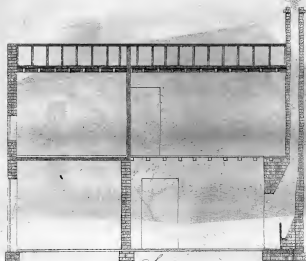


Elevation



Ground Plan.

T. J. Van der Burgh, Architect.



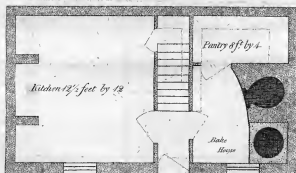
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Chamber Plan.

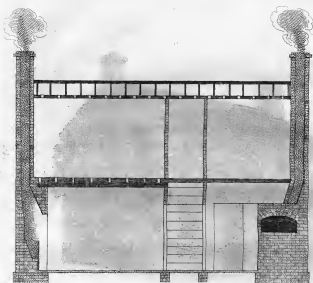


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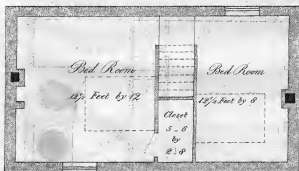


Ground Plan.





Section.



Chamber Plan.



PLANS, SPECIFICATIONS, &c.

THE Oswestry Society for *Bettering the Condition and Increasing the Comforts of the Poor* have considered, that the improvement of cottages is a subject well deserving ~~to~~ their particular attention; and therefore one of the prizes offered by the Society was five guineas for the best plan of a cottage with a specification and estimate.

The credit of the best arranged plan was due to John Davies, bricklayer, of Sweeney, which was drawn very much after the manner of a cottage, which he had lately built for me on Gwern-y-Brennin, in the Township of Maesbury, and now in the occupation of William Evans, labourer; but John Davies having failed in giving a proper specification and estimate, two guineas out of the five were withheld from him, and given to Mr. Thomas Jones, junior, builder, of Oswestry, who made the drawing, specification and estimate for the above mentioned larger plan of a cottage, which have been approved of by the Society; and under the direction of the Society he has since made a drawing and specification, for a smaller cottage without a cow-house, which has also been approved of, and ordered to be published herewith.

It is submitted to the intelligent reader, that when a labourer has a house well arranged, with the conveniencies of a small oven, boiler, &c. he is enabled thereby to save a great deal of trouble and expense in providing the food and reasonable comforts for his family; and that with two or three acres of moderately good land, and conveniencies for keeping a cow and a pig, attached to a good cottage, he can afford to pay a proportionably higher rent, and maintain his family better, than by paying half the rent with a ruinous and inconvenient dwelling.

When a proprietor improves or rebuilds a ruinous cottage, he does a kindness to his tenant, and a service to the publick; at the same time that he expends his money advantageously to himself and to his successors. The advantage of the improvement will of course be greater or less, as the value of the old materials or local circumstances may take off from the expense of having every thing to purchase, or to carry from any great distance, for improving or rebuilding a cottage. It is not by adding to the number of cottages so much as by improving those which are already built, that the comforts of the labouring class are to be considerably increased; for where new cottages are wanting, there is a sufficient inducement for building them, and the new buildings are generally much better arranged and more comfortable than those which it is the object of this publication to improve.

The specifications and estimates which are annexed to these plans, are such as a builder could afford to contract for and build cottages in the neighbourhood of Oswestry, having to find all materials and carriage; and to complete the whole

upon any particular spot of ground: but those who have old cottages to pull down will generally find all the heavy timbers for the new buildings out of those which are taken down, particularly; siderazors, beams, wall-plats, and lintels; very often floor joists; a double set of siderazors, partition pieces, timber which may be converted into door and window frames, carriages for stairs, &c.; leaving only the roof spars, part of the flooring boards, doors, and laths to be made out of new timber. The heavy materials also of stones and bricks will in part be furnished from the old buildings, paving stones perhaps, or some kind of materials in the floor will in one shape or another lessen the expense of carriage; and if the cloven spars of a thatched roof be unfit for a slated roof, they will come into use for partitions or other purposes. Old damaged timber may be converted into wall-plats and lintels, which would not sell for more than from 1s. to 2s. a cubick foot, and supply the place completely of what if purchased might cost from 3s. to 4s. per foot, including carriage. The old materials of a cottage will often save half the expense of building it anew.

The following calculations as to some of the principal parts of the work about a cottage may be relied on, as sufficiently accurate for practical purposes.

BRICK WALLS FOR A COTTAGE NINE INCHES THICK, EXCLUSIVE OF CARRIAGE.

	s.	d.
1000 bricks sold at Cyn-y-bwch, near Oswestry, at 28s. to 30s, may be made at from 20s. to 25s. and will build 21½ yards of walls 9 inches thick, say at 25s per 1000; per yard - - - - -	1	2
Lime per yard - - - - -	0	0½

	s	d
Bricklayers work, measuring round the quoins or corners, not deducting openings of doors and windows, and taking the chimney tunnels above the mantle as solid work, at per yard of 9 inches thick - - - - -	0	7
Per yard	1	9½

The gable ends above the wall-plats, and the chimnies, will take about as many bricks or stones as are saved in the openings of the doors and windows, and where the lintels and timbers are let into the brick-work, and by measuring the work round the corners; therefore the circumference of the building multiplied by the height to the wall-plat, will amount to nearly the quantity of bricks or stones used in the whole, exclusive of partitions.

**RUBBLE-STONE WALLS FOR A COTTAGE, WHICH
MUST BE EIGHTEEN INCHES THICK,
EXCLUSIVE OF CARRIAGE.**

	s	d
Stone at Sweeney mountain about 4d. per yard, of 18 inches thick; but it may be got, finding tools for the quar- rymen at 6d. per cart load, of nearly 2½ yards, weighing 1½ ton, say 3d. per yd.	0	3
Stone builder, per yard - - - - -	1	0
Lime, per yard - - - - -	0	3
Per yard	1	6

Comparison of the expenses between brick and stone walls.

Sixteen cubick feet of free-stone weigh a ton,*

* 112 lbs. to the cwt. is always intended in these estimates.

and $12\frac{1}{2}$ cwt. will make one yard of 18 inches wall which will be formed of 10 feet of stone, and $3\frac{1}{4}$ feet of mortar.*

A thousand bricks will measure $23\frac{1}{2}$ cubick feet, and will weigh 3t. 2c. 2qr.; a yard of brick work of 9 inches thick will contain 93 bricks, and weigh $5\frac{1}{4}$ cwt. or 7 lbs. to each brick; measuring $6\frac{1}{4}$ feet of bricks and half a foot of mortar.

The increased extent of the roof over a stone building is equal to 9 inches round the whole of the outside walls; and taking the carriage of the slates to be worth as much as the slates; the outward wall of the house to be 4 yards high; and the bearings of the roof spars will be the same, only extending the lower spars 9 inches; I find that about 4d. per yard should be added to the stone work on this account. I will then suppose the stones and the bricks are each to be carried one mile, and take the estimate of the carriage upon these *data*.

* The manner in which I made my calculation respecting the cost of lime for different parts of a building was as under, and I believe that it is accurate, as I had the help of an experienced builder to measure the work for that purpose: he apportioned the value of the lime, sand, carriage, &c. and I have reduced it to the cost of the lime only: it was 72 bushels at 6d. with 12 tumbrel loads of sand, and $4\frac{1}{2}$ bushels of hair.

	£	s	d
92 yards of 18 inches rubble-stone wall, at 3d.	1	3	0
46 yards 9 inches brick wall, at $\frac{1}{2}$ d. - - - -	0	1	11
232 yards plastering, 1 coat, at $\frac{1}{4}$ d. - - - -	0	9	8
48 yards slating, and pointing between the laths, at $\frac{1}{4}$ d. - - - - -	0	2	0
	£1	16	7

Cost of lime £1 16 0, at 6d. per customary bushel of 80 qts.

CARRIAGE OF BRICKS PER DAY.

	<i>s</i>	<i>d</i>
2 carts - - - - -	2	0
4 horses - - - - -	8	0
1 carter - - - - -	2	6
2 men half their time loading - -	2	0
4 men a quarter of their time } unloading - - - - - }	2	0
	<hr/>	<hr/>
	16	6

Six journies of 1 mile out and 1 mile back carrying $1\frac{1}{2}$ ton each journey, at $1\frac{1}{2}$ d. per cwt. o 2s. $9\frac{1}{4}$ d. each journey = 16s. $10\frac{1}{2}$ d.

CARRIAGE OF STONES PER DAY.

	<i>s</i>	<i>d</i>
2 carts - - - - -	2	0
4 horses - - - - -	8	0
1 carter - - - - -	2	6
2 men loading half their time - -	2	0
	<hr/>	<hr/>
	14	6

Six journies $1\frac{1}{2}$ ton each, at 1d. per cwt. 2s. 6d. each journey = 15s.

These may be considered as a short days works, but the horses and men are put down at a low rate, and the loads heavy: if the road be suitable for waggons to be used instead of carts, a very great saving in the expense may be made in the carriage of bricks, as they must be unloaded by hand; and a considerable saving in the carriage of stones: a waggon with four horses will carry nearly double what a cart will carry with three horses.

UPON THIS ESTIMATE BRICK WALLS WILL
COST PER YARD.

	s	d
Materials and work as above - -	1	10
Carriage - - - - -	0	6½
Carriage of lime and sand - - -	0	0½
	<hr/>	
	2	5

AND RUBBLE-STONE WALLS WILL COST PER
YARD.

	s	d
Materials and work as above - -	1	7
Carriage - - - - -	1	0½
Extra roof (see page 5) - - - -	0	4
Carriage of lime and sand - - -	0	3
	<hr/>	
	3	2½

The result of this estimate is, that it will be in most cases cheaper to build with bricks than stones, for if there were no carriage for either bricks or stones, the heavier carriage of the lime and sand, and the extra roof, would make the stone walls most expensive; but if both materials may be considered as equally good, it must depend entirely upon situation as to carriage, to determine whether stones or bricks will make the cheapest walls. I was by no means aware, that there would be in most cases, so great a difference in favor of brick walls till I had taken much trouble to make an accurate calculation.

Lime-stone is sometimes used for building, which unless the rock be very near to the spot, and no bricks within several miles, would cost almost double the price of brick walls: the weight of this stone is estimated at 12 cubick feet to

the ton, the quarrymen at Llanymynech are paid 1s. per ton for getting it, and it is charged at 2s. 3d. and 2s. 6d. when delivered on board a canal boat by railways: 10 feet will make a yard of wall, weighing $16\frac{1}{2}$ cwt. and allowing the same for the carriage, &c. as for free-stone.

LIME STONE WALLS WILL COST PER YARD.

	s	d
At the quarry, 10 feet of stone -	1	0
Carriage, &c. at 1d. per cwt. - -	1	$4\frac{1}{2}$
Builder, per yard - - - - -	1	0
Lime, sand, and carriage of the	0	6
same - - - - -		
Extra roof - - - - -	0	4
	<hr/>	
	4	$2\frac{1}{2}$

Still must situation as to materials decide even in the case of lime stone walls, whether they may not under some circumstances be cheaper than brick walls.

In some places, as near Ruabon, the scrapings of the turnpike roads are used instead of sand; and in that neighbourhood may be seen the best specimens of rubble stone walls, the free stone of Ruabon being remarkably well adapted for that kind of work.

The stone from Sweeney mountain which is commonly used for rubble walls, is of so hard a quality, that it cannot be scabbed into ashler stones without a great expence; but from the best quarry, houses and bridges have been built, and as well finished as they could have been with Grinshill or Ruabon stone, although this stone is much harder to work. But what is more to this purpose, there is a very good stone on the

highest part of Sweeney mountain, which will work in the same manner, and at the same cost as the Nesscliff stone; and as the carriage will be so much reduced by having the walls only 10 inches thick, it may become more extensively useful for ashler work, than the hard stone for rubble walls.

STONE WALLS TEN INCHES THICK, FROM THE
HIGHEST PART OF SWEENEY MOUNTAIN,
WILL COST BY THE YARD.

	s	d
Quarrying the stones and building walls per yard, 7 feet of stones and $\frac{1}{2}$ foot of mortar - - - - -	2	6
Lime, as for brick wall - - - - -	0	0 $\frac{1}{2}$
Carriage of stones, 140 lbs. per foot, 8 $\frac{1}{2}$ cwt. at 1 $\frac{1}{4}$ d. per cwt. rather more than bricks - - - - -	0	11
Carriage of sand and lime - - - - -	0	0 $\frac{1}{2}$
	<u>3</u>	<u>6</u>

HARD SWEENEY MOUNTAIN STONES, VERY
ROUGHLY SCABBLED, COST BY THE YARD.

	s	d
Six pillars 9 feet high and 20 inches square, laid in courses, may be consi- dered as equal to 18 yards of walls of 10 inches thick, though somewhat more, cost by the yard for building - - - - -	3	3
Getting these stones 1 shilling a load, 8 feet to a yard, allowing for waste, which served for a rubble wall, say -	0	6
Carriage of stones, 10 cwt. at 1d. - -	0	10
Lime, for 1 foot of mortar - - - - -	0	1
Carriage of lime and sand - - - - -	0	1
	<u>4</u>	<u>9</u>

This was tried by way of experiment, and as the work is very inferior to what might have been done for 3s. 6d. per yard as above, the particulars are mentioned only to prevent others from attempting to scabble the hard Sweeney mountain stone into any thing like good or cheap work.

A cottage is now being built near the top of Sweeney mountain, intended as a complete specimen of the above mentioned stone, which is adapted for common ashler work. The plinth, all the quoins, cornice, roof crests, skirting of ground floor, flags, staircase, partitions, and door screen will be of scabbled stone, and the intermediate parts of rubble stone work: the chamber floor and roof will be entirely of iron and slates, and the window sashes of cast iron.

CALCULATIONS FOR COVERING 22 SQUARE
YARDS OF A ROOF, HAVING 3 SPARS TO
A YARD, WITH LLANGONOG SLATES,
EXCLUSIVE OF CARRIAGE.

	s	d.
1000 slates will cover about 22 yards of roof, and cost at the quarry near Llanrhaiadr, Montgomeryshire - - - - }	18	0
200 heart of oak laths, at 4s. per 100 -	8	0
800 3d. lath nails - - - - -	2	0
750 red deal slate pegs, at 10d. per 1000	0	7½
250 4d. slate nails - - - - -	0	10
Lime, hair, and sand, at 1d. per yard	1	10
Slater's work, 7d. per yard - - - - -	12	10
Ditto punching laths, at 1d. per yard	1	10
	<u>£2</u>	<u>5 11½</u>

Therefore the best materials and labour for slating will cost 2s. 1d. per square yard, exclusive of carriage; and 1000 slates will weigh about a ton.

The roof slates from Oernant near Llangollen, are of a good quality, and cost a guinea per 1000, and those from Glynn near Chirk and Selattyn, cost from 13s. to 16s. per 1000, and are a very cheap and useful material; but these last, although they may justly be preferred, where a short distance of carriage is in their favor, they are not to be compared with the Oernant slates for durability, and still less are they to be compared with the Llangonog slates.

This valuable material, Llangonog slates, is extremely durable, and suffers no perceptible decay from long exposure to the weather: it admits of a roof being much flatter than thatch or tiles, and a rise of $\frac{1}{4}$ of the span, when the ridge is in the middle of the roof, is a very usual and simple rule for setting out the slope of a roof. As to the thickness of the slates on a roof, the fourth slate should cover the peg of the first slate, and so upwards in succession, whereby the peg of every slate will have 3 slates over it.

ESTIMATES FOR PAVING THE GROUND FLOOR, OR LAYING IT WITH OTHER MATERIALS.

Good paving stones make a very cheap and substantial floor, and will cost 3d. or 4d. per yard, after the ground is levelled.

The weight per square yard of various materials.

Size.	Thickness.			
in. by in.	1 $\frac{1}{2}$ in.	1 $\frac{1}{2}$ in.	2 in.	3 in.
-- -- Slate flags - - - - -	200 lbs	240 lbs	320 lbs	- - - -
9 $\frac{1}{2}$ - 9 $\frac{1}{2}$ Bulkley mountain tiles	- - - -	- - - -	195	- - - -
9 $\frac{1}{2}$ - 4 $\frac{1}{2}$ Brosely tiles - - - -	- - - -	128	- - - -	- - - -
9 - 4 $\frac{1}{2}$ Cym-y-bwch tiles - - - -	- - - -	- - - -	204	- - - -
8 $\frac{1}{2}$ - 6 Treferclawdd firebricks	- - - -	- - - -	188	- - - -
8 $\frac{1}{2}$ - 4 $\frac{1}{2}$ Ditto ditto - - - - -	- - - -	- - - -	- - - -	282 lb

Size.		Thickness.			
in.	by in.				
9	- 4½	Building bricks	- - - -	- - - -	224
- - -	- - -	Free-stone	- - - -	210	315

When the above materials are completely wet, the weight will be increased somewhat nearly in the inverse proportion to their respective weights, bulk for bulk, when perfectly dry; and I found that a Bulkley mountain floor-tile which weighed 13 lbs. when dry, would take up $\frac{1}{4}$ lb. of water, making a difference of about 6 per cent.

Common building bricks being often very porous, and insufficiently burnt, or otherwise very rough, and taking up a great deal of water (as they are lighter than Bulkley mountain tiles nearly as 7 to 10) I would not use them for the commonest cottage, within a moderate distance for the carriage of Bulkley mountain tiles, which make a most excellent, cleanly, and durable floor: and putting the carriage out of the question (which is considered a little further on, under this part of the subject) they would be the cheapest material for a floor in a short time, if it were only from the articles worn out in cleaning a rough brick floor, and which must always be either dirty or wet. What the difference of expense would be in a floor of 12 feet by 12 feet, will be seen as under.

Value of materials for laying a floor of 12 feet square, without the carriage.

	£	s	d
500 hard common bricks, 3 inches thick, sorted at 3s. - - - - -	0	15	0
240 Bulkley mountain tiles, 2 inches thick, at 15s. - - - - -	1	16	0

	£	s	d
480 Broseley tiles, $1\frac{1}{2}$ inch thick, } <i>delivered at Shrewsbury</i> at 12s. 6d. - - }	3	16	0
550 Treferclawdd fire bricks, 3 in- } ches thick, at 6s. - - - - - }	1	13	0
400 Ditto ditto, 2 inches thick, } dress'd at 12s. - - - - - }	2	8	0
544 Cyn-y-bwch tiles, 2 inches } thick, at 6s. - - - - - }	1	12	8
16 yards Cefn-ucha slates, $1\frac{1}{2}$ inch } thick, squared & <i>laid down</i> in courses }	1	12	0

Any of these brick or tile floors may be laid in mortar for about the same price as paving, or 4d. or 5d. per yard, after the ground has been prepared.

Carriage of Bulkley mountain tiles.

It appears from a printed hand-bill dated 6th October, 1812, that these floor tiles are delivered at Messrs. Judkins, Rigby, and Hancock's, wharf, Chester, at 16s. 8d. per 100: 5 per cent discount allowed for ready money, or 3 months credit; and Mr. Golding of Maesbury Marsh, offers to deliver them at Maesbury Marsh, near Oswestry, for 9s. 6d. per 100 tiles, or 16s. per ton, for carriage from Chester, being a distance of 55 miles by the Chester and Ellesmere Canals.

Upon these terms it appears, that the Bulkley mountain tiles, *delivered at Maesbury Marsh*, are a cheaper as well as a stronger and better material than the Broseley tiles for floors, in as far as Broseley tiles $1\frac{1}{2}$ inch thick, *delivered at Shrewsbury* for a floor of 12 feet square, will cost £3 16s as above mentioned; and Bulkley mountain tiles 2 inches thick, *delivered at Maesbury Marsh*, will cost for the same floor only £3. 2s. 9½d.

Mr. James Jones, chinaman, Oswestry, has Bulkley mountain tiles always on sale at Oswestry, and other valuable articles from Bulkley mountain: the ridge-tiles or crests made there are excellent, and are sold at the wharf in Chester, half a yard long, at 6½d. each. Bulkley mountain is near Mold in Flintshire, about 27 miles from Oswestry, by Wrexham and Caer-gwrle bridge.

The slaterock at Llangônog produces large flag slates of from 1 to 1½ inch in thickness, generally with one very even surface, and one good edge. I have them as large as about 8 feet long and 4 feet wide, and those were charged at 3s. a yard, but they are sold of smaller dimensions at 1s. 6d. per yard. A ton of these slate flags full 1½ inch in thickness, will cover about 11 yards of floor. These, like the roof slates from the same rock, will not suffer any perceptible decay from exposure to the weather; but for inside work, the Cefn-ucha slates are quite as good, and cheaper.

The best flooring slates which I have ever met with, came from the neighbourhood of Ruthin, and a good specimen of them may be seen in the floors of the houses opposite the West door of the Church at Chirk. These slate flags are likely to become more extensively useful, as a large quantity of them are being delivered on the Canal at Pentrefelin, 1½ mile on the Ruthin road from Llangollen; but the particulars of the terms at which they are to be sold on the Canal, is not yet settled.

At present therefore, the Cefn-ucha slate flags are the best in this neighbourhood, and I have obtained the following particulars from the person who rents the rock:

Robert Roberts, quarryman, of Pontvadoc near the Glynn, in the parish of Llansaintffraid-Glynn-Ceirïog, offers to furnish slate flags for floors, &c.; the flags to be quarried and delivered by him at a good place for loading, adjoining the rock at Cefn-ucha, being about 3 miles from Chirk, between Chirk Castle and Llangollen; the floors to be completed by Robert Roberts any where within 10 miles of Oswestry, exclusive of carriage, on the following terms:

	per square yard.	
	s	d
Floor of $1\frac{1}{2}$ inch flags jointed and laid -	1	6
Floor of $1\frac{1}{2}$ inch flags, squared and laid in courses - - - - -	2	0
Barn floor of thicker slabs squared and laid in courses - - - - -		
Flags, at the rock squared of sizes to order for shelves or floors - - - - -	1	0

A good specimen of these floors may be seen at the houses adjoining Morda bridge near Oswestry.

Robert Roberts says, that he can get these flags as large as 12 feet long by 4 feet wide, and that he has made a barn floor containing 22 square yards with only 5 stones.

As to the carriage of these flags: flags of $1\frac{1}{2}$ inch thick which is the proper thickness for floors, may be delivered on the Canal at Chirk, at about 4d. per yard, but they may be had of any thickness. The tonnage on the Canal is $1\frac{1}{2}$ d. per ton per mile, [now 2d.] for slates, and 1s. per mile for a boat of 20 tons burthen; so that 20 tons may be conveyed 20 miles on the Canal for £3 10s. as I am informed by Robert Roberts.

Slate floors are supposed to be damp, but those who use them know to the contrary, and very much prefer them to the best common brick or fire brick floors.

The moisture of the atmosphere which is absorbed by a common brick floor, is condensed on a slate floor; and in the same situations painted wood like slates, will appear damp in moist weather, while wood which is not painted, like common bricks which are porous, will absorb the moisture, and appear to be dry.

Slate flags make a cheap and very good floor, are easily cleaned, and soon dry after being washed.

There is a vast quantity of excellent brick-clay at Cyn-y-bwch within a mile of Oswestry, which supplies the Town and neighbourhood with builder's bricks, at from 28s. to 30s. per thousand, floor-tiles at 6s. per hundred, and ridge-tiles or crests of a foot long, at 3d. each.

Mr. Richard Griffiths, bricklayer, Oswestry, and Mr. Thomas Payne, brickmaker, Cyn-y-bwch, generally have bricks for sale at Cyn-y-bwch, and sometimes floor-tiles and crests.

This clay when tempered, moulded, and burnt with as much care as is taken at the Broseley and Bulkley mountain works, would make as good floor-tiles as any which have been produced either in Shropshire or Flintshire.

CAST IRON WINDOW SASHES RECOMMENDED
FOR COTTAGES, IN PREFERENCE TO
CASEMENTS.

Messrs. Francis, Wilkes, and Smith, Eagle-Foundry, Birmingham, have lately made two improved patterns by my direction, as under;

<i>ft. in.</i>	<i>ft. in.</i>	<i>lbs.</i>	<i>s. d.</i>	<i>s. d.</i>
2 4½	by 1 7	16½	5 6	or 1 6 per foot.
1 7	— 1 7	13	4 6	— 1 9½ ditto

the panes of glass for these sashes are 9 inches square; and I suppose, that the castings are intended to be charged 4d. per lb. Casements weigh 2 lbs. to the foot, at 9d. per lb. or 1s. 6d. per foot. Glazing casements with what is called Newcastle thirds is now worth 2s. per foot, and glazing cast iron sashes as above is worth 2s. 6d. per foot.

The difference in the expense between cast iron window sashes and casements is trifling, and it is only necessary that the cast iron sashes should be seen to insure them a decided preference. I have used nearly a hundred of these cast iron sashes, which combine in a variety of ways, to form the principal windows of a farm house, with 20 panes, or a pantry window of a cottage, with 4 panes, and intermediate sizes as are in part seen in the annexed plates.

These castings are hung on centre pivots for windows of single castings, but where one casting is used above another, as in the principal cottage windows, the upper casting only should be made to open. Those which are hung on pivots may be made to stand open by a small slide or wire pin on the inside of the frame, and are

fastened when shut by the same wire pin. I have never used a casement window in any new building, nor do I ever intend to use one, as I very much prefer these cast iron sashes: they are not likely to be broken, and they never can be worn out nor want repair; and an accident which may break a great many panes in a leaded casement, would probably break only one pane of an iron sash window.

SPECIFICATION

FOR ERECTING A COTTAGE,

ACCORDING TO THE ANNEXED PLAN.

GROUND WORK.

For walls, &c. to be sunk down one foot below the surface of kitchen floor, and the soil arising therefrom to be wheeled 5 yards from the building and levelled.

BRICK WORK.

The foundations to be $1\frac{1}{2}$ brick in thickness, up to the underside of the kitchen floor; the walls, chimnies, &c. to set off equally on each side the same, and to be built with good sound bricks from the most convenient place; laid in good mortar; the outsides worked fair with the proper openings as shewn in the plans. Cornice to the cottage, and bricks under sill of boose in cow-house. Kitchen and passage to be laid with common bricks in sand. Oven to be well and substantially built, with a floor of dressed bricks laid therein; such brick work as is necessary to set kitchen grate and furnace; the partitions dividing the different apartments to be brick nog.

ged; funnels to be well pargetted; a large slate fixed about $4\frac{1}{2}$ feet high over calf-kit, which will answer as a shelf in pantry. This calf-kit may either have a loft above it, or a shelf for the pantry, as may be ordered.

CARPENTRY WORK.

A door frame to entrance of good oak; scantling 3 inches by 4, and a door of bastard oak, both wrought, rabbitted, and beaded. Window frames of oak $3\frac{1}{2}$ inches by $3\frac{1}{2}$ inches, fitted with cast iron sashes; rabbitted to receive glass, each square to be 9 inches by 9; hung on pivots to open, for air, &c. and beaded centre boards over the same and doors. A floor consisting of a beam, 5 inches by 8 inches; joists $2\frac{1}{2}$ inches by 3 inches, and 15 inches distance from their centres; properly framed and fixed, and boarded rough with ash, or poplar; a roof of oak properly prepared, framed, and fixed. Wall-plats 3 inches by 6. Sideraisers 6 inches by 6 inches. Spars $2\frac{1}{2}$ inches by 3 inches, and 15 inches distant, or 2 to a yard.* Ridgeboard 1 inch by 3 inches. Ties and lintels 3 inches by 4 inches, several will be wanting in brick nogging; a ceiling over chambers of fir spars, 2 inches by 2 inches fixed from sideraisers to partitions. Floor over cow-house of poles, hewed and fixed in the walls, and floored with slabs, also hewed; rough oak doors, and frames, to cow-house and pitching hole. Boose range of oak, cap, and sill, 3 inches by 4 inches; standards $2\frac{1}{2}$ by 3 inches, framed and fixed.—Stairs of bastard oak rough, with carriages, newel, balusters, and handrail at the top: inside doors, of $\frac{1}{2}$ inch fir, lightly wrought and ledged, with

* The flooring boards, and heart laths for the roof, should be cut in lengths to suit the distances of the joists and spars from each other respectively.

casings of the same, nailed to uprights, rabbitted for door and beaded to receive plaster. A mantle shelf of fir, wrought and fixed with a square ledge on front; 2 heights of shelves each side of milk-house of inch oak rough. Window board to kitchen wrought of the same or deal. Oak curb round furnace.

SLATING.

Roof to be covered with Llangynog or Oernant slates, on heart oak lath, finished with earthen crest; and pointed inside, excepting that part of the roof which is below the sideraisers, and is to be tiled and whitewashed.

PLASTERING.

The walls of kitchen, staircase, and chambers, to be plastered two coats; pantry and bakehouse plastered and rendered one coat, properly returned to doors and windows; kitchen and staircase rendered two coats; the chamber ceilings lathed and plastered two coats; and the whole whitewashed.

GLAZING.

Iron sashes to be glazed with common crown glass, properly puttied and made air tight. Cow-house, calf-kit, pantry, and bakehouse, pitched with pebbles.

The wood work which is seen outside painted two coats plain.

Plinths and iron dowels to outside doors. Iron latches and hinges to all the doors. Stock lock to entrance door, and iron grate 2 feet long with

niggard irons fixed in kitchen; bars set in fire-place of chamber, as the brick work is carried up; 2 pieces of iron, 1 to each chimney, fixed in brick work to support the breast. An iron boiler about 20 gallons with door and grate fixed in brewhouse.

ESTIMATE

FOR A COTTAGE,

ACCORDING TO THE ANNEXED PLAN
AND SPECIFICATION.

<i>yds. ft. in.</i>		<i>s d</i>	<i>£ s d</i>
38 0 0	Lineal foundations dug and } wheeled away - - - - - }	3	0 9 6
187 0 0	1 brick length work in sundries 4	37	8 0
8 4 6	Labour only to openings in do.	7	0 4 11½
17 0 0	Lineal cornice, extra - - - -	2	0 2 10
19 2 3	Brick floors laid in sand - - - 2	2	2 1 8½
	Extra for oven - - - - -		0 7 6
63 2 3	Brick nogging (4d. for labour) 2	1	6 11 9
11 0 0	Lineal funnels pargetted - - -	9	0 8 3
3 0 0	Large slate fixed over calf-kit 5		0 15 0
18 0	Entrance door frame - - - - -	7½	0 11 3
15 7	Ditto door - - - - -	1 2	0 18 2
sqrs. 33 8	Window frames for iron sashes	9	1 5 3
3 57 2	Floor framed, beam & joists, } labour only - - - - - }	7	1 5 0
23 0	Lineal centre boards - - - - -	5	0 9 7
3 13 3	Floor boarded, labour & nails 8	6	1 6 7½
5 83 0	Roof, labour, gads, and nails 9		2 12 6
1 82 9	Ceiling, labour and nails - - 4	6	0 8 2½
1 6 4	Floor over cow-house, labour } only - - - - - }	3	0 3 2
94 6	Slabbing ditto, labour and } materials - - - - - }	14	0 13 2½
24 3	Cow-house & pitching hole, } door frames - - - - - }	6½	0 13 1½
20 6	Ditto ditto, doors - - - - -	11	0 18 9½
63 0	Boose fitted and fixed, labour 6		0 3 9
35 0	Stairs and carriages - - - - - 1	1	1 17 11
6 0	Lineal, newel and handrail -	6	0 3 0

Carried forward £61 19 0½

ft. in.		Brought forward		s.	d.	£	s.	d.
30	0	Ditto balusters at top	- - - -	2	0	5	0	0
10	0	Door under stairs	- - - -	5½	0	4	7	
14	0	Frame to ditto	- - - -	4	0	4	8	
105	9	Inside doors	- - - -	6½	2	17	3	
28	10	Casings to ditto	- - - -	6½	0	15	7	
		A mantle shelf fixed	- - - -		0	3	0	
28	0	Shelves in pantry	- - - -	9	1	1	0	
		Kitchen window board	- - - -		0	1	6	
		Curb round furnace	- - - -		0	5	0	
no. ft. in.		ft. in.		Timber in sundries.				
11	5	6=	60 6	Joists kitchen floor				
13	6	9=	87 9	Ditto ditto				
15	7	0=	105 0	Ditto over pantry & bakehouse				
4	2	0=	8 0	Ditto staircase				
84	5	6=	462 0	Spars for roof				
			21	Uprights for boose				
		744	3	3 inches by 2½		- - - -	3½	10 17 0½
ft.		ft. in.						
13	8 in.	by 5=	3 7	Beam over kitchen				
50	3	—	6=	6 3	Wall-plats			
50	6	—	6=	12 6	Sideraisers			
		22	4			- - - -	5	5 11 8
yds. ft. in.								
143	0	Fir spars for ceiling, 2 by 2		- - - -	2½	1	9	9
358	0	Boards allowing for loss		- - - -	5	7	9	2
68	0	Poles over cowhouse		- - - -	3	0	17	0
200	0	Ties, lintels, bond timber, quarters round doors, &c. materials and labour		- - - -	5½	4	11	8
18	0	Boose, cap & sill, materials only		- - - -	5	0	7	6
69	0	0	Slatting		- - - -	3	10	7 0
8	-1	6	Lineal ridging crests		- - - -	1	4	0 11 4
162	2	3	Plastering kitchen, stair-case, and bedrooms		- - - -	8	5	8 2
40	3	0	Ditto pantry & bakehouse		- - - -	5	0	16 9½
8	0	0	Rendering one coat		- - - -	10	0	6 8
18	0	0	Ditto two ditto		- - - -	1	1	0 19 6
20	2	3	Chamber ceilings		- - - -	1	5	1 8 8
			Iron sashes, 130 lb.		- - - -	4	2	3 4
20	3		Glafs in ditto (2s. 6d. since the new duty)		- - - -	1	9	1 15 5
23	0	0	Paving		- - - -	1	3	1 8 9
				£124 6 0½				

	s	d	£	s	d
Brought forward - - -	124	6	0	4	
Painting - - - - -		0	7	0	
Plinths and iron dowels - - -		0	8	0	
10 iron latches and fixing - - 1	6	0	15	0	
Hinges to outside doors - - -		0	4	0	
3 pairs to inside ditto - - - 1	3	0	10	0	
Lock - - - - -		0	3	6	
Iron grate, setting, bricks, &c. -		1	9	0	
Bars in chamber - - - - -		0	3	0	
2 irons to chimney-breasts - -		0	11	0	
Boiler, about 20 gallons - - -	9½	0	15	10	
Door and frame 20 lb. - - -	3	0	5	0	
Grate, 19 lb- - - - -	2½	0	3	11½	
Brick work to ditto & setting -		0	9	0	
		£130	10	4½	

The above specification and estimate was made by Mr. Thomas Jones, junior, of Oswestry, in 1812; and a similar specification and estimate was afterwards made by him for the smaller plan annexed, of a cottage without a cowhouse, and the amount of the latter estimate, including the new duty on glass, is £105-8s.

It is earnestly hoped, that these remarks on cottages, as well as the plans, specifications, and estimates, will be useful to landlords whose cottages may want repair; and that by calling their attention to those advantageous circumstances, which so very much reduce the expenses of repairing cottages, the objects of the Society, and the interests of the *deserving* poor, may in some degree be promoted.

Errata, page 3, et seq.

The number of bricks in a square yard of wall 9 inches thick, should have been taken at 100, according to the customary allowance: and the following corrected estimates include the carriage of bricks and stones for one mile, as before.

	s.	d.
Brick walls, 9 inches thick, per yard -	3	8½
Ditto, 14 ditto, - - - - -	5	7
Rubble stone walls, 18 inches thick -	4	2½
Sweeney mountain ashler stone walls } scabbled, 10 inches thick - - - - }	4	6½
Ditto ditto ditto, 9 inches - - - -	4	3

JAN. 22, 1816.

